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APPELLANTS' BRIEF Mail Stop APPEAL Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450	Attorney Docket No.	STAN-010CON2
	Confirmation No.	3761
	First Named Inventor	Stanley Cohen
	Application Number	10/697,720
	Filing Date	October 29, 2003
	Group Art Unit	1642
	Examiner Name	Yu, Misook
	Title:	"Mammalian Tumor Susceptibility Genes and their Uses"

Sir:

This Brief is filed in support of Appellants' appeal from the Examiner's Rejection dated August 4, 2009. No claims have been allowed. Claims 29-34 are pending, Claims 31-34 have been withdrawn from consideration. Claims 1-28 are canceled. The rejection of Claims 29-34 is appealed. A Notice of Appeal was filed on December 4, 2009. The Board of Appeals and Interferences has jurisdiction over this appeal pursuant to 35 U.S.C. §134(a).

The Commissioner is hereby authorized to charge deposit account number 50-0815, reference no. STAN-010CON2 to cover any required fee for filing the Applicant's brief. Additionally, in the event that the fee transmittal or other papers are separated from this document and/or other fees or relief are required, the Appellant petitions for such relief, including extensions of time, and authorize the Commissioner to charge any fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 which may be required by this paper, or to credit any overpayment, to the above disclosed deposit account.

I. REAL PARTY IN INTEREST

The inventors named on this patent application assigned their entire rights to the invention to the Board of Trustees of the Leland Stanford Junior University.

II. RELATED APPEALS AND INTERFERENCES

There are currently no other appeals or interferences known to Appellants, the undersigned Appellants' representative, or the assignee to whom the inventors assigned their rights in the instant case, which would directly affect or be directly affected by, or have a bearing on the Board's decision in the instant appeal.

III. STATUS OF CLAIMS

The present application was filed on October 29, 2003 with a preliminary amendment canceling Claims 1-23 and presenting new claims 24-28. During the course of prosecution, Claims 1-28 were canceled, and Claims 31-34 were added. Accordingly, Claims 31-34 are pending in the present application, of which Claims 29-30 stand rejected and are appealed herein.

IV. STATUS OF AMENDMENTS

Claim 29 was canceled and Claim 30 was amended in Applicants response to Final Office Action of October 21, 2009. The Advisory Action of December 4, 2008 indicated that the amendments would not be entered, and thus the claims stand as presented in the prior amendment, dated April 14, 2009. No further amendments have been made to the claims.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed invention is drawn to polypeptide compositions.

Claim 29 recites "an isolated polypeptide comprising the sequence of amino acid residues 11-390 of SEQ ID NO:4", and Claim 30 to a polypeptide "comprising the sequence of amino acid residues 11-390 of SEQ ID NO:4, free of other proteins and other cellular debris". The sequence identifier "SEQ ID NO:4" corresponds to the protein identified in the specification as human TSG101.

The specification describes at page 7, line 8, the normal sequence of human TSG101 as provided by SEQ ID NO:3. The protein product of this genetic sequence is set forth in SEQ ID NO:4.

The sequence alignment pasted in below shows the relationship between the DNA sequence and the protein sequence:

(SEQ ID NO:3)

gaaggggtgtg cgattgtgtg ggacgggtctg gggcagccca gcagcggctg accctctgcc 60
 tgcggggaag ggagtcgcca ggcggccgctc atg gcg gtg tcg gag agc cag ctc 114
 Met Ala Val Ser Glu Ser Gln Leu

1 5

aag aaa atg gtg tcc aag tac aaa tac aga gac cta act gta cgt gaa 162
 Lys Lys Met Val Ser Lys Tyr Lys Tyr Arg Asp Leu Thr Val Arg Glu
 10 15 20

act gtc aat gtt att act cta tac aaa gat ctc aaa cct gtt ttg gat 210
 Thr Val Asn Val Ile Thr Leu Tyr Lys Asp Leu Lys Pro Val Leu Asp
 25 30 35 40

tca tat gtt ttt aac gat ggc agt tcc agg gaa cta atg aac ctc act 258
 Ser Tyr Val Phe Asn Asp Gly Ser Ser Arg Glu Leu Met Asn Leu Thr
 45 50 55

gga aca atc cct gtg cct tat aga ggt aat aca tac aat att cca ata 306
 Gly Thr Ile Pro Val Pro Tyr Arg Gly Asn Thr Tyr Asn Ile Pro Ile
 60 65 70

tgc cta tgg cta ctg gac aca tac cca tat aat ccc cct atc tgt ttt 354
 Cys Leu Trp Leu Leu Asp Thr Pro Tyr Asn Pro Pro Ile Cys Phe
 75 80 85

gtt aag cct act agt tca atg act att aaa aca gga aag cat gtt gat 402
 Val Lys Pro Thr Ser Ser Met Thr Ile Lys Thr Gly Lys His Val Asp
 90 95 100

gca aat ggg aag ata tat ctt cct tat cta cat gaa tgg aaa cac cca 450
 Ala Asn Gly Lys Ile Tyr Leu Pro Tyr Leu His Glu Trp Lys His Pro
 105 110 115 120

cag tca gac ttg ttg ggg ctt att cag gtc atg att gtg gta ttt gga 498
 Gln Ser Asp Leu Leu Gly Leu Ile Gln Val Met Ile Val Val Phe Gly
 125 130 135

gat gaa cct cca gtc ttc tct cgt cct att tcg gca tcc tat ccg cca 546
 Asp Glu Pro Pro Val Phe Ser Arg Pro Ile Ser Ala Ser Tyr Pro Pro
 140 145 150

tac cag gca acg ggg cca cca aat act tcc tac atg cca ggc atg cca 594
 Tyr Gln Ala Thr Gly Pro Pro Asn Thr Ser Tyr Met Pro Gly Met Pro
 155 160 165

ggt gga atc tct cca tac cca tcc gga tac cct ccc aat ccc agt ggt 642
 Gly Gly Ile Ser Pro Tyr Pro Ser Gly Tyr Pro Pro Asn Pro Ser Gly
 170 175 180

tac cca ggc tgt cct tac cca cct ggt ggt cca tat cct gcc aca aca 690
 Tyr Pro Gly Cys Pro Tyr Pro Pro Gly Gly Pro Tyr Pro Ala Thr Thr
 185 190 195 200

agt tct cag tac cct tct cag cct cct gtg acc act gtt ggt ccc agt 738
 Ser Ser Gln Tyr Pro Ser Gln Pro Pro Val Thr Thr Val Gly Pro Ser
 205 210 215

agg gat ggc aca atc agc gag gac acc atc cga gcc tct ctc atc tct 786
 Arg Asp Gly Thr Ile Ser Glu Asp Thr Ile Arg Ala Ser Leu Ile Ser
 220 225 230

gcg gtc agt gac aaa ctg aga tgg cgg atg aag gag gaa atg gat cgt 834
 Ala Val Ser Asp Lys Leu Arg Trp Arg Met Lys Glu Glu Met Asp Arg
 235 240 245

gcc cag gca gag ctc aat gcc ttg aaa cga aca gaa gaa gac ctg aaa 882

Ala Gln Ala Glu Leu Asn Ala Leu Lys Arg Thr Glu Glu Asp Leu Lys
 250 255 260

aag ggt cac cag aaa ctg gaa gag atg gtt acc cgt tta gat caa gaa 930
 Lys Gly His Gln Lys Leu Glu Glu Met Val Thr Arg Leu Asp Gln Glu
 265 270 275 280

gta gcc gag gtt gat aaa aac ata gaa ctt ttg aaa aag aag gat gaa 978
 Val Ala Glu Val Asp Lys Asn Ile Glu Leu Lys Lys Lys Asp Glu
 285 290 295

gaa ctc agt tct gct ctg gaa aaa atg gaa aat cag tct gaa aac aat 1026
 Glu Leu Ser Ser Ala Leu Glu Lys Met Glu Asn Gln Ser Glu Asn Asn
 300 305 310

gat atc gat gaa gtt atc att ccc aca gct ccc tta tac aaa cag atc 1074
 Asp Ile Asp Glu Val Ile Ile Pro Thr Ala Pro Leu Tyr Lys Gln Ile
 315 320 325

ctg aat ctg tat gca gaa gaa aac gct att gaa gac act atc ttt tac 1122
 Leu Asn Leu Tyr Ala Glu Glu Asn Ala Ile Glu Asp Thr Ile Phe Tyr
 330 335 340

ttg gga gaa gcc ttg aga agg ggc gtg ata gac ctg gat gtc ttc ctg 1170
 Leu Gly Glu Ala Leu Arg Arg Gly Val Ile Asp Leu Asp Val Phe Leu
 345 350 355 360

aag cat gta cgt ctt ctg tcc cgt aaa cag ttc cag ctg agg gca cta 1218
 Lys His Val Arg Leu Leu Ser Arg Lys Gln Phe Gln Leu Arg Ala Leu
 365 370 375

atg caa aaa gca aga aag act gcc ggt ctc agt gac ctc tac tga 1263
 Met Gln Lys Ala Arg Lys Thr Ala Gly Leu Ser Asp Leu Tyr *
 380 385 390

cttctctgat accagctgga gggtgagctc ttcttaaagt attcttctct tccttttato 1323
 agtaggtgcc cagaataagt tattgcagtt tatcattcaa gtgtaaaata ttttgaatca 1383
 ataatatatt ttctgttttc ttttggtaaa gactggcttt tattaatgca cttcttatcc 1443
 tctgtaaaact ttttgtgctg aatggtggga ctgctaaaata aaatttggtt t 1494

(SEQ ID NO:4)

Met Ala Val Ser Glu Ser Gln Leu Lys Lys Met Val Ser Lys Tyr Lys
 1 5 10 15

Tyr Arg Asp Leu Thr Val Arg Glu Thr Val Asn Val Ile Thr Leu Tyr
 20 25 30

Lys Asp Leu Lys Pro Val Leu Asp Ser Tyr Val Phe Asn Asp Gly Ser
 35 40 45

Ser Arg Glu Leu Met Asn Leu Thr Gly Thr Ile Pro Val Pro Tyr Arg
 50 55 60

Gly Asn Thr Tyr Asn Ile Pro Ile Cys Leu Trp Leu Leu Asp Thr Tyr
 65 70 75 80

Pro Tyr Asn Pro Pro Ile Cys Phe Val Lys Pro Thr Ser Ser Met Thr
 85 90 95

Ile Lys Thr Gly Lys His Val Asp Ala Asn Gly Lys Ile Tyr Leu Pro
 100 105 110

Tyr Leu His Glu Trp Lys His Pro Gln Ser Asp Leu Leu Gly Leu Ile
 115 120 125

Gln Val Met Ile Val Val Phe Gly Asp Glu Pro Pro Val Phe Ser Arg
 130 135 140

Pro Ile Ser Ala Ser Tyr Pro Pro Tyr Gln Ala Thr Gly Pro Pro Asn
 145 150 155 160

Thr Ser Tyr Met Pro Gly Met Pro Gly Gly Ile Ser Pro Tyr Pro Ser
 165 170 175

Gly Tyr Pro Pro Asn Pro Ser Gly Tyr Pro Gly Cys Pro Tyr Pro Pro
 180 185 190

Gly Gly Pro Tyr Pro Ala Thr Thr Ser Ser Gln Tyr Pro Ser Gln Pro
 195 200 205

Pro	Val	Thr	Thr	Val	Gly	Pro	Ser	Arg	Asp	Gly	Thr	Ile	Ser	Glu	Asp
210						215					220				
Thr	Ile	Arg	Ala	Ser	Leu	Ile	Ser	Ala	Val	Ser	Asp	Lys	Leu	Arg	Trp
225					230					235					240
Arg	Met	Lys	Glu	Glu	Met	Asp	Arg	Ala	Gln	Ala	Glu	Leu	Asn	Ala	Leu
				245					250					255	
Lys	Arg	Thr	Glu	Glu	Asp	Leu	Lys	Lys	Gly	His	Gln	Lys	Leu	Glu	Glu
			260					265					270		
Met	Val	Thr	Arg	Leu	Asp	Gln	Glu	Val	Ala	Glu	Val	Asp	Lys	Asn	Ile
		275				280						285			
Glu	Leu	Leu	Lys	Lys	Lys	Asp	Glu	Glu	Leu	Ser	Ser	Ala	Leu	Glu	Lys
290						295				300					
Met	Glu	Asn	Gln	Ser	Glu	Asn	Asn	Asp	Ile	Asp	Glu	Val	Ile	Ile	Pro
305					310					315					320
Thr	Ala	Pro	Leu	Tyr	Lys	Gln	Ile	Leu	Asn	Leu	Tyr	Ala	Glu	Glu	Asn
				325					330					335	
Ala	Ile	Glu	Asp	Thr	Ile	Phe	Tyr	Leu	Gly	Glu	Ala	Leu	Arg	Arg	Gly
			340					345					350		
Val	Ile	Asp	Leu	Asp	Val	Phe	Leu	Lys	His	Val	Arg	Leu	Leu	Ser	Arg
		355				360						365			
Lys	Gln	Phe	Gln	Leu	Arg	Ala	Leu	Met	Gln	Lys	Ala	Arg	Lys	Thr	Ala
	370					375					380				
Gly	Leu	Ser	Asp	Leu	Tyr										
385					390										

The specification describes at page 15, lines 4-10, the isolation of proteins encoded by the TSG101 coding sequence, and particularly at page 15, lines 9-10, that they may be "free of other proteins, as well as cellular debris".

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

I. Claims 29 and 30 have been rejected under 35 U.S.C. 102(b) as anticipated by Genbank Accession number U8213, June 4, 1998.

II. Claims 29-30 have been rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 5,892,016, Brie et al., as teaching an isolated protein identical to the instant SEQ ID NO:4.

VII. ARGUMENT

The pending rejections in the instant case are based on Appellants' claim to priority. It is not disputed that the cited references, Genbank Accession number U8213 and U.S. Patent No. 5,892,016, teach a polypeptide having the sequence set forth in SEQ ID NO:4. Both references are available as of the filing date of the immediate application, that is October 29, 2003; and both references are not available as references at the time Appellants' priority applications were filed. The Examiner has asserted that the disclosure in the priority document disclosure of SEQ ID NO:4 does not provide support for Appellants' SEQ ID NO:14. Applicants assert that, in view of the

claimed polypeptide, amino acid residues 11-390 of SEQ ID NO:4, being identical in sequence to the previously filed polypeptide, that the requirements for priority are met.

As a factual matter, Appellants have provided below an alignment of SEQ ID NO:4 from the priority document, U.S. Patent no. 5,891,668, having a filing date of June 13, 1996 (upper query sequence) with the presently claimed polypeptide, SEQ ID NO:4, residues 11-390 (lower subject sequence). It can readily be observed that, in fact, the sequences are completely identical.

Score = 781 bits (2018), Expect = 0.0, Method: Compositional matrix adjust.
Identities = 380/380 (100%), Positives = 380/380 (100%), Gaps = 0/380 (0%)

Query	1	MVSKYKYRDLTVRETQNVITLYKDLKPVLD SYVFNDGSSRELMNLTGTIPVYRGNTYNI	60
		MVSKYKYRDLTVRETQNVITLYKDLKPVLD SYVFNDGSSRELMNLTGTIPVYRGNTYNI	
Sbjct	11	MVSKYKYRDLTVRETQNVITLYKDLKPVLD SYVFNDGSSRELMNLTGTIPVYRGNTYNI	70
Query	61	PICLWLLDTPYNPPICFVKPTSSMTIKTGKHVDANGKIYLPYLHEWKHPQSDLLGLIQV	120
		PICLWLLDTPYNPPICFVKPTSSMTIKTGKHVDANGKIYLPYLHEWKHPQSDLLGLIQV	
Sbjct	71	PICLWLLDTPYNPPICFVKPTSSMTIKTGKHVDANGKIYLPYLHEWKHPQSDLLGLIQV	130
Query	121	MIVVFGDEPPVFSRPISASYPYQATGPPNTSYMPGMPGGISPYPSPGYPPNPSGYPGCPY	180
		MIVVFGDEPPVFSRPISASYPYQATGPPNTSYMPGMPGGISPYPSPGYPPNPSGYPGCPY	
Sbjct	131	MIVVFGDEPPVFSRPISASYPYQATGPPNTSYMPGMPGGISPYPSPGYPPNPSGYPGCPY	190
Query	181	PPGGYPATTSSQYPSQPPVTTVGPSRDGTISED TIRASLISAVSDKLRWRMKEEMDRAQ	240
		PPGGYPATTSSQYPSQPPVTTVGPSRDGTISED TIRASLISAVSDKLRWRMKEEMDRAQ	
Sbjct	191	PPGGYPATTSSQYPSQPPVTTVGPSRDGTISED TIRASLISAVSDKLRWRMKEEMDRAQ	250
Query	241	AELNALKRTEEDLKKGHQKLEEMVTRLDQEVAEVDKNI ELLKKKDEELSSALEKMNQSE	300
		AELNALKRTEEDLKKGHQKLEEMVTRLDQEVAEVDKNI ELLKKKDEELSSALEKMNQSE	
Sbjct	251	AELNALKRTEEDLKKGHQKLEEMVTRLDQEVAEVDKNI ELLKKKDEELSSALEKMNQSE	310
Query	301	NNDIDEVVIPTAPLYKQILNLYAEENAIEDTIFYLGEALRRGVIDL DVFLKHVRLLSRKQ	360
		NNDIDEVVIPTAPLYKQILNLYAEENAIEDTIFYLGEALRRGVIDL DVFLKHVRLLSRKQ	
Sbjct	311	NNDIDEVVIPTAPLYKQILNLYAEENAIEDTIFYLGEALRRGVIDL DVFLKHVRLLSRKQ	370
Query	361	FQLRALMQKARKTAGLS DLY	380
		FQLRALMQKARKTAGLS DLY	
Sbjct	371	FQLRALMQKARKTAGLS DLY	390

The Examiner has asserted that because the sequence in the present application contains an additional 10 amino acid acids, it is a different product. As stated in the Final Office Action at page 5, the Examiner asserts "one skilled in the art would not recognize the structure of instant SEQ ID NO:4 protein was disclosed in the earlier specification". Appellants respectfully submit that this is a clear error.

Given that the two amino acid sequence are completely identical, and have been consistently referenced in the specification, one of skill in the art would have no difficulty in determining that they were, in fact, the same protein.

The Examiner has taken the position that the additional 10 amino acids present in the currently filed sequence listing, although not listed in the claims, would render the polypeptide unrecognizable to one of skill in the art.

Appellants submit that those of skill in the art are quite capable of determining that two proteins of identical sequence are the same protein. With respect to the Examiner's assertion that the presence of the 10 amino acid sequence renders the presently claimed polypeptide unrecognizable, Appellants note the discussion in the priority document, for example in U.S. Patent no. 5,891,668, provides for the conjugation of the polypeptide to other proteins as carriers, and incorporates by reference such well-known texts as Sambrook, et al. Molecular Cloning: A Laboratory Manual, CSH Press 1989, pp.14.2-14.33, which provides one of skill in the art methods for fusing the sequence of one polypeptide to another.

Appellants respectfully submit that in view of the 100% amino acid identity between the presently claimed protein and the protein sequence set forth in Appellants priority documents; and in view of the knowledge of one of skill in the art with respect to fusing the sequence of one polypeptide to another, that the requirements for priority are met.

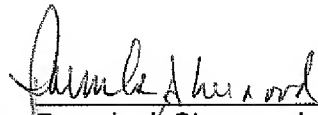
In view of the priority claim made at least to U.S. Patent no. 5,891,668, having a filing date of June 13, 1996, Appellants submit that the cited art, Genbank Accession number U8213, June 4, 1998; and U.S. Patent no. 5,892,016, filed January 23, 1997, are not available as art under U.S. 102, and therefore do not anticipate the presently claimed invention.

The Appellants respectfully request that the rejection of Claims 29-30 be withdrawn, and that the application be remanded to the Examiner with instructions to issue a Notice of Allowance.

The appropriate fee is either attached or authorized. If the Commissioner determines that an additional fee is necessary, the Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. **50-0815**.

Respectfully submitted,
BOZICEVIC, FIELD AND FRANCIS LLP

Date: June 11, 2010



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VIII. CLAIMS APPENDIX

The claims on appeal are as follows:

29. (previously presented) An isolated polypeptide comprising the sequence of amino acid residues 11-390 of SEQ ID NO:4.

30. (previously presented) A polypeptide comprising the sequence of amino acid residues 11-390 of SEQ ID NO:4, free of other proteins and other cellular debris.

31. (withdrawn) A complex comprising the polypeptide of Claim 29 and an antibody bound thereto.

32. (withdrawn) The complex of Claim 31, wherein said antibody is a monoclonal antibody.

33. (withdrawn) An antibody which binds to the polypeptide of Claim 29, to form the complex of Claim 32.

34. (withdrawn) The antibody of Claim 33, wherein said antibody is a monoclonal antibody.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.